General

Title

Cervical cancer screening: percentage of Pap tests with an HSIL+ result that have a histological confirmation of HSIL, carcinoma in situ, or invasive carcinoma within 12 months of the HSIL+ Pap test.

Source(s)

Canadian Partnership Against Cancer. Cervical cancer screening in Canada: monitoring & evaluation of quality indicators. Toronto (ON): Canadian Partnership Against Cancer; 2016 May. 81 p.

Measure Domain

Primary Measure Domain

Population Health Quality Measures: Population Process

Secondary Measure Domain

Does not apply to this measure

Brief Abstract

Description

This measure is used to assess the percentage of Pap tests with an high-grade squamous intraepithelial lesions (HSIL+) result that have a histological confirmation of HSIL, carcinoma in situ, or invasive carcinoma within 12 months of the HSIL+ Pap test.

Rationale

The introduction of cervical cancer screening using the Papanicolaou test (Pap test) has led to significant reductions in cervical cancer incidence and mortality in Canada. From 1977 to 2015, the incidence of invasive cervical cancer declined from 15.4 per 100,000 to an estimated 7.5 per 100,000 and invasive cervical cancer mortality declined from 4.8 per 100,000 to an estimated 1.6 per 100,000 (Canadian Cancer Society, Advisory Committee on Cancer Statistics, 2015). Despite this success, in 2015, an estimated 1,500 Canadian women will be diagnosed with invasive cervical cancer and 380 will die from the disease (Canadian Cancer Society, Advisory Committee on Cancer Statistics, 2015). Many of these women were

not screened in the five years before their diagnosis, were not followed up appropriately after an abnormal Pap test result, or the Pap test failed to detect their cancer. Additionally, women with lower levels of income, education, new immigrants, women living in rural or remote locations, and who have limited access to screening are less likely to be screened (Canadian Partnership Against Cancer, 2014). For these reasons, it is critical to continuously monitor and evaluate cervical cancer screening to ensure that Canadian women receive high-quality cancer prevention services.

The agreement between screening cytology and histology is a measure of both the positive predictive value (PPV) of the Pap test and the accuracy of colposcopy assessment and biopsy interpretation. A low cytology-histology agreement may indicate that high-grade lesions are being over-called or that lesions are missed at colposcopy. The cytology-histology agreement rate is influenced by interpretive variables but also by the colposcopy follow-up rate, the histological investigation rate, and the completeness and availability of colposcopy and histology information.

Evidence for Rationale

Canadian Cancer Society, Advisory Committee on Cancer Statistics. Canadian cancer statistics 2015. Toronto (ON): Canadian Cancer Society; 2015. 151 p.

Canadian Partnership Against Cancer. Cervical cancer screening in Canada: monitoring & evaluation of quality indicators. Toronto (ON): Canadian Partnership Against Cancer; 2016 May. 81 p.

Canadian Partnership Against Cancer. Examining disparities in cancer control: a system performance special focus report. Toronto (ON): Canadian Partnership Against Cancer; 2014 Feb. 88 p.

Primary Health Components

Cervical cancer screening; Pap test; high-grade squamous intraepithelial lesions (HSIL+); carcinoma in situ; invasive carcinoma

Denominator Description

Number of Pap tests with a high-grade squamous intraepithelial lesions (HSIL+) result that have a histological work-up within 12 months of the HSIL+ Pap test (see the related "Denominator Inclusions/Exclusions" field)

Numerator Description

Number of Pap tests with high-grade squamous intraepithelial lesions (HSIL+) results that have a histological confirmation of HSIL, carcinoma in situ, or invasive carcinoma within 12 months of the HSIL+ Pap test (see the related "Numerator Inclusions/Exclusions" field)

Evidence Supporting the Measure

Type of Evidence Supporting the Criterion of Quality for the Measure

A clinical practice guideline or other peer-reviewed synthesis of the clinical research evidence

A formal consensus procedure, involving experts in relevant clinical, methodological, public health and organizational sciences

A systematic review of the clinical research literature (e.g., Cochrane Review)

One or more research studies published in a National Library of Medicine (NLM) indexed, peer-reviewed journal

Additional Information Supporting Need for the Measure

Cervical cancer is caused by infection with the human papillomavirus (HPV) (Trottier & Franco, 2006; Dawar, Deeks, & Dobson, 2007). Of the more than 100 types of identified HPV, 40 infect the genital tract; of these, approximately 15 are considered high risk, with types 16 and 18 causally linked to 70% of cervical cancer cases. HPV is a highly prevalent sexually transmitted virus; peak prevalence occurs during adolescence and the early 20s after the commencement of sexual activity.

Most HPV infections are transient and are cleared by the immune system without signs or symptoms. However, a small percentage of women experience persistent infections. For these women, the average time between becoming infected with a high risk HPV type and developing a pre-cancerous lesion is 24 months, with a further eight to 12 years before the development of invasive cervical cancer. Because of this long latency period, screening is an effective strategy for the identification and treatment of pre-cancerous cervical lesions.

Evidence for Additional Information Supporting Need for the Measure

Canadian Partnership Against Cancer. Cervical cancer screening in Canada: monitoring & evaluation of quality indicators. Toronto (ON): Canadian Partnership Against Cancer; 2016 May. 81 p.

Dawar M, Deeks S, Dobson S. Human papillomavirus vaccines launch a new era in cervical cancer prevention. CMAJ. 2007 Aug 28;177(5):456-61.

Trottier H, Franco EL. The epidemiology of genital human papillomavirus infection. Vaccine. 2006 Mar 30;24 Suppl 1:S1-15. PubMed

Extent of Measure Testing

Unspecified

State of Use of the Measure

State of Use

Current routine use

Current Use

not defined yet

Application of the Measure in its Current Use

Measurement Setting

Ambulatory/Office-based Care

State/Provincial Public Health Programs

Professionals Involved in Delivery of Health Services

not defined yet

Least Aggregated Level of Services Delivery Addressed

State/Provincial

Statement of Acceptable Minimum Sample Size

Does not apply to this measure

Target Population Age

Age 21 to 69 years

Target Population Gender

Female (only)

National Framework for Public Health Quality

Public Health Aims for Quality

Health Promoting

Population-centered

Vigilant

National Strategy for Quality Improvement in Health Care

National Quality Strategy Aim

Healthy People/Healthy Communities

National Quality Strategy Priority

Health and Well-being of Communities
Prevention and Treatment of Leading Causes of Mortality

Institute of Medicine (IOM) National Health Care Quality Report Categories

IOM Care Need

Staying Healthy

IOM Domain

Effectiveness

Data Collection for the Measure

Case Finding Period

- January 1, 2011 to December 31, 2011
- January 1, 2012 to December 31, 2012
- January 1, 2013 to December 31, 2013

Denominator Sampling Frame

Geographically defined

Denominator (Index) Event or Characteristic

Clinical Condition

Diagnostic Evaluation

Denominator Time Window

not defined yet

Denominator Inclusions/Exclusions

Inclusions
Number of Pap tests with a high-grade squamous intraepithelial lesions (HSIL+) result that have a histological work-up within 12 months of the HSIL+ Pap test

Note: A histology result includes any cervical, vaginal, or endocervical histology result.

Exclusions
Unspecified

Exclusions/Exceptions

not defined yet

Numerator Inclusions/Exclusions

Inclusions

Number of Pap tests with high-grade squamous intraepithelial lesions (HSIL+) results that have a histological confirmation of HSIL, carcinoma in situ, or invasive carcinoma within 12 months of the HSIL+ Pap test

Note:

> Use the date the Pap test with the atypical squamous cells–cannot exclude high-grade squamous intraepithelial lesion (ASC-H) only or HSIL+ result was performed.
> The Pap test should be performed in the calendar year of interest but the biopsy can be performed in the next calendar year.
> Use the cytology diagnostic category map (refer to Appendix A in the original measure documentation).
> If a woman has more than one histological result in the time frame, use the more severe histology outcome.

Exclusions

Unspecified

Numerator Search Strategy

Fixed time period or point in time

Data Source

State/Province public health data

Type of Health State

Does not apply to this measure

Instruments Used and/or Associated with the Measure

Cervical Cancer Screening Pathway with Quality Indicators

Computation of the Measure

Measure Specifies Disaggregation

Does not apply to this measure

Scoring

Rate/Proportion

Interpretation of Score

Desired value is a higher score

Allowance for Patient or Population Factors

not defined yet

Description of Allowance for Patient or Population Factors

Calculate age-specific rates.

Age Groups: 21-29, 30-39, 40-49, 50-59, 60-69

Standard of Comparison

not defined yet

Prescriptive Standard

Greater than or equal to 65% of high-grade Pap tests (high-grade squamous intraepithelial lesions [HSIL+] cytology results) should have a pre-cancerous, carcinoma in situ, or an invasive cancer histological outcome.

Evidence for Prescriptive Standard

Canadian Partnership Against Cancer. Cervical cancer screening in Canada: monitoring & evaluation of quality indicators. Toronto (ON): Canadian Partnership Against Cancer; 2016 May. 81 p.

Identifying Information

Original Title

8b. Cytology-histology agreement.

Measure Collection Name

Cervical Cancer Screening Indicators

Submitter

Canadian Partnership Against Cancer - National Government Agency [Non-U.S.]

Developer

Canadian Partnership Against Cancer - National Government Agency [Non-U.S.]

Public Health Agency of Canada - National Government Agency [Non-U.S.]

Funding Source(s)

A financial contribution from Health Canada, through the Canadian Partnership Against Cancer

Composition of the Group that Developed the Measure

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Financial Disclosures/Other Potential Conflicts of Interest

Unspecified

Adaptation

This measure was not adapted from another source.

Date of Most Current Version in NQMC

2016 May

Measure Maintenance

Unspecified

Date of Next Anticipated Revision

Unspecified

Measure Status

This is the current release of the measure.

The measure developer reaffirmed the currency of this measure in February 2017.

Measure Availability

Source available from the Canadian Partnership Against Cancer Web site .

For more information, contact the Canadian Partnership Against Cancer at 1 University Ave, Suite 300, Toronto, ON, Canada M5J 2P1; Phone: 1-877-360-1665; E-mail: info@cancerview.ca; Web site: www.cancerview.ca .

Companion Documents

The following is available:

> Canadian Partnership Against Cancer. Cervical cancer screening in Canada: setting targets for program performance. Toronto (ON): Canadian Partnership Against Cancer; 2013 Nov 13. 27 p. This document is available from the Canadian Partnership Against Cancer Web site .

NQMC Status

This NQMC summary was completed by ECRI Institute on August 22, 2016. The information was verified by the measure developer on September 27, 2016.

The information was reaffirmed by the measure developer on February 1, 2017.

Copyright Statement

Production

Source(s)

Canadian Partnership Against Cancer. Cervical cancer screening in Canada: monitoring & evaluation of quality indicators. Toronto (ON): Canadian Partnership Against Cancer; 2016 May. 81 p.

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